Amendments to the Claims

The listing of claims below will replace all prior versions and listings of claims in the present application. Please cancel claims 1, 2, 4-8, 10-14, 17 and 22-25. Please add the following new claims:

Claim Listing

1-25. (Cancelled)

26. (New) A method for making an electrical-energy-storage unit comprising components fabricated by the method steps as follow:

a) preparing a wet-chemical-prepared calcined composition-modified barium titanate powder derived from a solution of precursors: $Ba(NO_3)_2$, $Ca(NO_3)_2 \cdot 4H_2O$, $Nd(NO_3)_3 \cdot 6H_2O$, $Y(NO_3)_3 \cdot 4H_2O$, $Mn(CH_3COO)_2 \cdot \cdot 4H_2O$, $ZrO(NO_3)_2$, and $[CH_3CH(O-)COONH_4]_2Ti(OH)_2$ in deionized water heated to 80° C, and a separate solution of $(CH_3)_4NOH$ made in deionized water and heated to 80°-85° C, then mixing the solutions by pumping the heated ingredient streams simultaneously through a coaxial fluid mixer producing coprecipitated powder, then collecting the coprecipitated powder in a drown-out vessel and refluxing at a temperature of 90°-95° C for 12 hours, then filtering, washing with deionized-water, drying, and then calcining 1050° C in air;

b) fabricating an aluminum oxide (Al_2O_3) coating of 100 Å thickness onto the wet-chemical-prepared calcined composition-modified barium titanate powder, with the use of aluminum nitrate nonahydrate precursor applied by wet chemical means, then calcining at 1050° C, resulting in a single-coated calcined composition-modified barium titanate powder;

c) fabricating onto the alumina-coated composition-modified barium titanate powder, a second uniform coating of 100 Å of calcium magnesium aluminosilicate glass derived from alcohol-soluble precursors: calcium methoxide or calcium isopropoxide, magnesium methoxide or magnesium ethoxide, aluminum ethoxide or aluminum isopropoxide, and tetraethyl

orthosilicate are applied by wet chemical means which upon calcining at 500° C results in a double-coated composition-modified barium titanate powder;

d) blending, this double-coated composition-modified barium titanate powder with a screen-printing ink containing appropriate plastic resins, surfactants, lubricants, and solvents to provide a suitable rheology for screen printing;

e) screen-printing into interleaved multilayers of alternating offset nickel electrode layers **12** and double-coated calcined composition-modified barium titanate high-relative-permittivity layers **11** with the use of screening inks having the proper rheology for each of the layers;

f) drying and cutting the screen-printed multilayer components **15** into a specified rectangular area;

g) sintering the screen-printed multilayer components **15**, first at a temperature of 350° C for a specified length of time, then at 850° C for a specified length of time, to form closed-pore porous ceramic bodies;

h) hot isostatically pressing the closed-pore porous ceramic bodies, at a temperature of 700° C with a specified pressure, into a void-free condition;

i) grinding and each side of the component to expose the alternating offset interleaved nickel electrodes **12**;

j) connecting nickel side bars **14** to each side of the components **15**, that have the interleaved and alternating offset nickel electrodes **12** exposed, by applying nickel ink with the proper rheology to each side and clamping the combinations together;

k) heating the components and side nickel bar combination **14-15** at 800° C for a time duration of 20 minutes to bond them together;

1) wave soldering each side of the conducting bars;

m) assembling the components **15** with the connected nickel side bars **14** into the first array, utilizing unique tooling and solder-bump technology;

n) assembling the first arrays into the second array; and

o) assembling the second arrays into the EESU final assembly.

27. (New) The method of claim 26 wherein a second coating of glass is provided onto the double-coated composition-modified barium titanate powder being in contact with the nickel electrodes and having an applied working voltage of 3500 V across the parallel electrodes.

28. (New) The method of claim 26 wherein a dielectric voltage breakdown strength of 5.0×10^6 V/cm is achieved across the electrodes of the components.

29. (New) The method of claim 26 wherein the method provides an ease of manufacturing due to the softening temperature of the calcium magnesium aluminosilicate glass allowing the relatively low hot-isostatic-pressing temperatures of 700° C which in turn provides a void-free ceramic body.

30. (New) The method of claim 26 wherein the method provides an ease of fabrication due to the softening temperature of the calcium magnesium aluminosilicate glass allowing the relatively low hot-isostatic-pressing temperatures of 700° C which in turn allows the use of nickel for the conduction-path electrodes rather than expensive platinum, palladium, or palladium-silver alloy.

31. (New) The method of claim 26 wherein the method provides an ease of fabrication due to the softening temperature of the calcium magnesium aluminosilicate glass allowing the relatively low hot-isostatic-pressing temperatures of 700° C, which feature along with the coating method provided a uniform-thickness shell of the calcium magnesium aluminosilicate glass and in turn provides hot-isostatic-pressed double-coated composition-modified barium titanate high-relative-permittivity layers that are uniform and homogeneous in microstructure.

32. (New) The method of claim 26 wherein the method provides the double coating of the basis particles of the composition-modified barium titanate powder thereby

reducing the leakage and aging of this material by an order of magnitude of the specification of this basis material, thus reducing the discharge rate to 0.1% per 30 days.

33. (New) The method of claim 26 wherein the method provides a double coating of the composition-modified barium titanate powder, the hot-isostatic-pressing process, the high-density solder-bump packaging, and along with the double-layered array configuration store 52,220 W•h of electrical energy in a 2005 inches^3 container.

34. (New) The method of claim 26 wherein the method provides materials used: water-soluble precursors of barium (Ba), calcium (Ca), titanium (Ti), zirconium (Zr), manganese (Mn), yttrium (Y), neodymium (Nd), forming the composition-modified barium titanate powder, and the metals: nickel (Ni), and copper (Cu), which are not explosive, corrosive, or hazardous.

35. (New) The method of claim 26 wherein the method provides an EESU that is not explosive, corrosive, or hazardous and therefore is a safe product when used in electrical vehicles, which include bicycles, tractors, buses, cars, or any device used for transportation or to perform work.

36. (New) The method of claim 26 wherein the method provides an EESU which can store electrical energy generated from solar voltaic cells or other alternative sources for residential, commercial, or industrial applications.

37. (New) The method of claim 26 wherein the method provides an EESU which can store electrical energy from the present utility grid during the night when the demand for electrical power is low and then deliver the electrical energy during the peak power demand times and thus provide an effective power averaging function.

38. (New) The method of claim 26 wherein the method provides a double coating of the composition-modified barium titanate powder and a hot-isostatic-pressing process which together assists in allowing an applied voltage of 3500 V to a dielectric thickness of 12.76 x 10^{-6}m to be achieved.

39. (New) The method of claim 26 wherein the method provides an EESU which when fully discharged and recharged, the EESU's initial specifications are not degraded.

40. (New) The method of claim 26 wherein the method provides an EESU which can be safely charged to 3500 V and stored at least 52.22 kW•h of electrical energy.

41. (New) The method of claim 26 wherein the method provides an EESU that has a total capacitance of at least 31 F.

42. (New) The method of claim 26 wherein the method provides an EESU that can be rapidly charged without damaging the material or reducing its life.